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# THE SAFETY ORGANIZATION

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**Hon. Michael Starr**  
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encourage accident prevention activities and  
safety programmes among persons employed  
in the public service of Canada."





## WHY A SAFETY PROGRAM?

A well organized safety program is important because it conserves both manpower and material. This is well recognized by executives today and through their sponsorship accident prevention is made a definite part of their departmental policy.

The success of a safety program can best be measured by the number of people in an establishment who are actively cooperating in accident prevention work.

The important phase is not so much economic as it is humanitarian. The cost in suffering to those injured and to their families merits serious attention to safety work by all connected with the public service. But there is also the secondary issue, for the accident costs involved cannot be shrugged off as though they do not matter. They do matter. They matter just as much as the cost of pencils, paper, paint, machinery and other materials, and consequently they must be watched just as carefully.

A safety program to be effective must have the support of all concerned. Safety needs constant and consistent effort not spasmodic campaigns with nothing in between. The price of safety is eternal vigilance.

## THE SAFETY ORGANIZATION

The safety organization of any establishment may best be described as a group or body composed of those who are concerned with the safety and well-being of their fellow workers.

Some departments will have the need for an elaborate group which involves safety officers, clerical help, charts and diagrams and long range policies; others may need only an individual keeping a tight control on the accident situation. The size and scope of the safety organization will be governed by the accident record, the hazards involved and the area covered.

Regardless of the size of the safety organization required, it is essential that administration issue a clear cut statement of policy for the guidance of those concerned. Such a statement of policy will indicate administration's viewpoint in principle and should cover in general the following basic elements:

1. Administration leadership  
(Assumption of responsibility—declaration of policy)
2. Assignment of responsibility  
(To operating officials—safety directors—supervisors—committees)
3. Maintenance of safe working conditions  
(Inspectors—engineering revisions—purchasing)

4. Establishment of safety training  
(For supervisors—for workers)
5. An accident record system  
(Accident analysis—reports on injuries—measurement of results)
6. Medical and first aid systems  
(Placement examinations—treatment of injuries—first aid service—periodic health examination)
7. Acceptance of personal responsibility by employees  
(Training—maintenance of interest)

Administration's responsibility for the safety program does not end with the establishment of the safety organization and approval of its activities. Executives must take the lead in keeping interest alive in safety matters by attending safety meetings, reviewing safety records, taking the action indicated and setting a good example for the workers by wearing personal safety devices where required. They can, also, do much by discussing accident prevention with the supervisors.

## **THE SAFETY COMMITTEE**

A safety committee is a group of employees appointed to aid and advise administration on matters of worker safety.

The committee may be composed of a senior administrator and two or three supervisors, or a supervisor and several workers, or any other combination of supervisors and workers. The number of members will depend on the size and organization of the establishment and the hazards involved. It is important that administration be represented and participate in the conduct of the committee meetings.

The chairman should be a supervisor and will be chosen for qualities of leadership, interest in safety, and ability to get results.

## **THE FUNCTIONS OF A SAFETY COMMITTEE**

Many establishments have little or no formal safety program, and senior administrators and supervisors are left on their own to sandwich safety in with other activities; consequently, the value of a safety committee is not always recognized. A safety committee cannot take away the supervisor's responsibility for safety but it does help him in his constant effort to prevent accidents.



The on-the-job experience of the committee members is valuable in determining hazardous conditions and methods of work, suggesting corrective measures and obtaining participation by all personnel. By their observations, thinking, and discussions they provide the stimulation and suggestions necessary to maintain safe conditions and enlist the cooperation of the workers.

While the scope of the safety committee's activities in most cases is chiefly advisory, administration may find it practical to appoint an engineer, supervisor or master mechanic to the committee with authority to correct unsafe conditions without further approval.

Through its activities and reports the safety committee keeps administration informed as to the conditions of the buildings, grounds, and equipment and the progress or requirements for increased safety.

The successful safety committee has a definite place in any establishment by helping plan the safety program and making it operate. These activities will be determined by the size of the committee and the policies set out by the establishment's administration. It has been found advisable to establish definite policies when the committee is being organized including some or all of the following:

1. Establish procedures for handling suggestions and recommendations of the Committee and the workers.

2. Conduct regularly scheduled meetings for the purpose of discussing accident prevention methods, safety promotion, items noted on inspections, injury records, and other pertinent subjects.
3. Inspect each month a selected area or areas of the establishment for the purpose of discovering accident sources and hazards.
4. Investigate accidents to search out and eliminate accident hazards.
5. Provide information to foremen in regard to safe working methods and practices.
6. Recommend changes or additions to protective equipment or personal safety devices.
7. Develop or revise safe practices and rules to comply with current needs.
8. Promote safety and first-aid training for committee members and workers.

## **HANDLING SAFETY SUGGESTIONS**

The success of the safety committee depends, to some extent, upon the means provided for complying with or rejecting recommendations, and the subsequent follow-up. A step-by-step procedure for handling recommendations should follow a definite pattern, such as:

1. Recommendations submitted to committee by workers or committee members.
2. Discussion and acceptance, modification, or rejection by committee.
3. Accepted recommendation submitted to administration.
4. Written reply to committee from administration.
5. Result reported to originator of recommendation.
6. Final report to committee on completion of recommendation.

## **COMPUTING INJURY RATES**

It is not possible to determine how many eyes, fingers, legs, or lives are saved through safety activities, as there are so many variables involved. However, standard measuring sticks have been developed which are being used throughout the country.

## INJURY FREQUENCY RATE

Injury Frequency Rate is a determination of the number of disabling injuries per million man-hours worked.

The formula is written:

$$\text{Injury Frequency Rate} = \frac{\text{Number of disabling injuries} \times 1,000,000}{\text{Total number of employee-hours worked}}$$

A disabling injury is defined as one which prevents a worker from resuming work at the beginning of the next day or shift (lost time) or results in some permanent bodily impairment (death—loss of finger—loss of sight, etc.)

The total number of employee-hours worked may be obtained directly from the payroll figures or determined by multiplying the number of employees by the average number of hours worked in the given period.

Assuming that an installation of 250 employees worked 24 days at 8 hours per day and there were two disabling injuries:

$$\text{Injury Frequency Rate} = \frac{2 \times 1,000,000}{48,000} = 41.67$$

Injury Frequency Rate = 41.67 for the month.

By calculating the Frequency Rate at regular periods (monthly, quarterly, annually) the safety committee can judge the safety program's progress or effectiveness. These rates are useful for comparative purposes



and will indicate how the record compares with similar operations, but their real value is apparent when they are used in comparison with rates earned previously in your own organization.

### **INJURY SEVERITY RATE**

The standard Injury Severity Rate is the number of days charged per 1,000,000 man-hours worked.

The formula is written:

$$\text{Injury Severity Rate} = \frac{\text{Days charged} \times 1,000,000}{\text{Man-hours of exposure}}$$

Days charged is the combined total, for all injuries, of:

- (a) all days of disability resulting from temporary total injuries, and
- (b) all scheduled charges assigned to fatal, permanent total and permanent partial injuries.

### **AVERAGE DAYS CHARGED PER DISABLING INJURY**

This expresses the relationship between total days charged and the total number of disabling injuries. The average may be calculated by use of the following formula:

$$\text{Average days charged per disabling injury} = \frac{\text{Total days charged}}{\text{Total disabling injuries}}$$

## **SAFETY INSPECTIONS**

Safety inspections are one of the principal means of locating accident causes. They assist in determining what safeguarding is necessary to protect against hazards before accidents and personal injuries occur.

Just as inspections of parts of the manufacturing process are important functions in quality control, so are safety inspections of vital importance in accident control.

The finding of unsafe conditions by means of inspection and their prompt safeguarding is one of the best methods for administration to demonstrate to employees its interest and sincerity in accident prevention. Likewise failure to correct promptly unsafe conditions destroys worker confidence in administration's sincerity.

Inspections help to sell the safety program to employees. Each time an inspector or an inspection committee passes through the work area, administration's interest in safety is advertised. Regular inspections encourage individual employees to inspect their own immediate work areas.

In addition, inspections enable the personnel of the safety organization to come in contact with individual workmen and to enlist their help in eliminating accidents. Frequently, the workmen are able to point out unsafe conditions that may otherwise go unnoticed

and unguarded. When such suggestions are acted upon and proper safeguarding completed, the employee realizes that he has contributed to the safe conditions and that his cooperation is appreciated.

Inspections should not be limited to the search for unsafe physical conditions but should also include examination to detect unsafe practices.

It should be kept in mind that safety inspections are not conducted primarily to find how many things are wrong but rather to determine if everything is satisfactory.

In preparing for an inspection, it is advisable to analyze all accidents for the past several years so that special attention can be given those conditions and those locations known to be accident producers.

## **ACCIDENT INVESTIGATION**

An investigation should be made of every accident which results in a disabling injury. Accidents resulting in non-disabling injuries or no injury at all, should be investigated if time and facilities permit. Should there be a frequent recurrence of certain types of non-disabling injuries or if the frequency of accidents is high in certain areas, these too should be investigated.

Accident investigation is of such prime importance in any safety program that the administrators and the persons operating the safety program must protect its

soundness as a method for preventing accidents. Investigations must be kept objective, factual and free from punitive motives. Otherwise, they may do more harm than good.

This does not rule out the fixing of responsibility where personal failure has caused injury or that the persons responsible should be excused from the consequences. However, the investigation itself is concerned only with the facts of the incident and the investigating individual or group is best kept free from adjudicating responsibility; concerning itself with accident causes only.

The principal purposes of an accident investigation therefore are:

1. To learn accident causes so that similar accidents may be prevented by mechanical improvement, better supervision or employee instruction.
2. To publicize the particular hazard among the employees and their supervisors and to direct attention to accident prevention in general.
3. To determine facts bearing on responsibility. An investigation undertaken for this purpose, though, will seldom give enough information for accident prevention purposes. On the other hand, an investigation for preventative purposes may disclose facts which are important in determining liability.



## TRAINING

The detail involved in securing and maintaining a good standard of safe behavior among the employees of any given establishment is comprehensive. Yet, the basic procedures used are relatively simple. They may in brief terms be set forth as:

- (a) Safety Education — To develop safety consciousness.
- (b) Safety Training — Developing the workers skill in the use of safe work procedures and practices.
- (c) Safety Supervision — Supervision that teaches, exemplifies and practices first rate safety performances.
- (d) Safety Organization — Devising, maintaining and modifying as conditions require, a specific set-up to develop teamwork in the further development of safety.

Safety educational work to be effective must be much more than an advertising campaign. Promotional programs employing such devices as slogans, stunts, pictures, posters, etc., play a vital part in safety but as is true of all advertising, this type of promotion must be supplemented by intensive individual contact.

Each workman must be stimulated and helped to weave safety into his own day-by-day activities. This means that the hazards of all operations must be

analyzed and safe procedures established. Safety educational work limited to giving workmen general cautions and safety slogans without telling each one definitely what to do, what not to do and why, are not enough. Few individuals will apply the general principles, to their own activities, of the wisdom contained in a slogan, except sporadically and in a limited fashion. Detailed guidance and reasonably continuous emphasis is needed.

Training increases one's effectiveness in doing that which education points out the way to do. Training in safety must be given as it is in other arts, by instruction, demonstration and repetition under supervision. Fortunately, most men can quite readily be sold on the safety idea to the extent that they want to work safely and with relatively little supervision.

The safety training of the employee is a never-ending process. His introduction to safety work should start with his first interview. An explanation of the safety policy should be given by the chief of personnel or the officer first receiving the new employee.

The branch or division head after first finding out what the employee knows about the job should thoroughly instruct him in the exact way it is to be performed, stressing safety throughout. The hazards of the work and the reasons for safety rules should be discussed. The new employee should be given every opportunity to ask questions on doubtful points. After

a demonstration of the work to be done, the employee might be required to explain the job and then to do it to make certain that he or she understands the instruction given. This gives the head or supervisor an opportunity to correct mistakes before bad habits are formed. After this preliminary instruction, the supervisor should check the new worker continuously for safety just as he does for skill on the job.

It is evident that quality of supervision will determine effectiveness of training. The supervisor is the keyman in any safety program. He must see that safety is given its full share of attention in all that is done. Basing their attitude on this fact, many administrators have passed the entire responsibility for safety to supervisors, but the job cannot be done that way. Administration must not only require that proper attention be paid to safety by every staff member but it must plan and direct the work, take an active interest in it and take whatever action may be necessary to discover and correct weaknesses.

The major part of safety work must be done by the regular organization. Safety committees with worker representation have been very valuable, particularly in discovering overlooked hazards and in stimulating employee interest. Directed by safety-minded administrators, ready to do their full part, such groups can play a large part in eliminating injuries. The entire responsibility for safety, however, cannot be passed on

to these committees any more than it can to the supervisors. Only administration can provide the leadership and the executive drive needed. With administration's responsibility thoroughly understood and faithfully met, the committee organization best suited to the needs of the establishment can readily be determined.

## **ACCIDENT RECORDS**

Records of accidents are essential to efficient and successful safety work just as records of production, costs, sales, and profit and loss are essential to efficient and successful operation of a business. Records supply the information necessary to transform haphazard, costly, ineffective safety work into a planned safety program which permits full use of all proved techniques to effect control over specific conditions and situations which cause accidents. Records are the foundation of a scientific approach to accident prevention.

When kept in accordance with the standard method, records provide the safety officer with an objective evaluation of his safety program, they identify high-rate areas and give him the information he needs to remove accident causes which contribute most to the high rates. More specifically, the records may be used to:

1. Create interest in safety among supervisors by furnishing them with information about the accident records of their divisions or sections.



2. Determine the principal accident sources so that efforts may be concentrated where the largest reduction in accidents can be effected.
3. Provide supervisors and safety committees with information about the most frequent unsafe practices and unsafe conditions so that these persons can utilize their time and efforts to the greatest advantage.
4. Judge the effectiveness of the safety program by showing whether the accident record is getting better or worse and by providing comparisons with the records of similar organizations.

There are five important steps in developing adequate information about employee accident experience:

1. Obtain a report on every injury, including medical treatment cases.
2. Classify and record each injury according to accepted methods.
3. Prepare a monthly or other periodic summary report showing injury rates and the circumstances and causes of the accidents which resulted in the injuries.
4. Analyze periodically the circumstances and causes of the accidents.
5. Make an annual report to those in authority.

## OFF-THE-JOB SAFETY

The safety of employees while away from work might at first be considered as a matter outside the field of an establishment safety organization. However, the services of a man who is injured off duty is lost to the department just as much as though he had been injured on the job. The worker spends less than a third of his weekly time on the job and what happens to him during his off time is becoming of increasing concern to administration.

Records compiled by some industrialists have shown the ratio between on the job injuries to off the job injuries to be approximately one in seven.

The main goal of off the job safety and on the job accident prevention is one and the same, namely, keeping the worker free from injury.

Any off the job accident prevention program is a natural development of the on the job safety program and meshes with the whole structure of accident prevention.

The supervisor can promote off the job safety without the appearance of paternalism by a simple, friendly interest in the off hours welfare of the workers. In personal contacts, in conversation before the beginning of workers' vacations and, in safety meetings, the supervisor can sell the workers the idea that they owe it to themselves and their families to make safety a way of life.

## **10 STEPS TO SAFETY**

### **1. FIND THE PROBLEM**

Review the accident records to localize hazardous areas and work practices. Make a comprehensive general inspection. Look for unsafe practices as well as unsafe conditions.

### **2. DISCUSS THE PROBLEM WITH SECTION HEADS**

Plan the safety program with the supervisory staff. You need their understanding, agreement and cooperation.

### **3. ORGANIZE A SAFETY COMMITTEE**

A safety committee with authority and backing can handle the problem and control safety activities. The committee keeps administration posted as to the accident situation and deals with safety matters generally.

### **4. ESTABLISH SAFETY RECORDS**

Adopt a reporting form for individual injury cases—one which gets at the causes of injury—keep a running summary record of disabling and first aid cases.

## **5. SET UP INSPECTION ROUTINES**

Keep track of conditions and work practices on an organized basis. Assure that inspections are made, reported on and followed up.

## **6. GIVE SAFE JOB INSTRUCTION**

The more routine the job, the more rapid the turnover, the greater the need for safe job instruction and supervision. Plan refresher sessions.

## **7. ENLIST AID OF EMPLOYEES**

Show employees the purpose of safety. Instill responsibility for safety. An employee cannot be forced to work safely; he has to be persuaded.

## **8. INVESTIGATE, ANALYSE, CURE**

Find out why accidents happen. Check into causes, motives, reasons, circumstances. Classify cases, detect bad spots and apply the remedy.

## **9. HOME SAFETY**

Accident prevention is a round-the-clock job. Include off the job safety in your safety program. For every worker who receives a disabling work injury on the job seven are disabled by off the job accidents.



## **10. FOLLOW UP**

Accident prevention is like putting pressure on a coiled spring. Release the pressure and you are back where you started. Safety is a result of expert, tight administration.





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